

We claim:

- 1           1.       A high fluid loss spotting pill comprising:  
2               a carrier fluid;  
3               an LCM consisting essentially of an amount and form of acid soluble mineral  
4               particulate;  
5               said amount and said form being adapted to form a substantially impermeable,  
6               acid soluble filtercake upon injection of said composition with said  
7               carrier fluid into said wellbore and defluidization.
- 1           2.       The high fluid loss spotting pill of claim 1 further comprising  
2               a first quantity of weighting agent; and  
3               a second quantity of suspending agent effective to suspend said weighting  
4               agent.
- 1           3.       The high fluid loss spotting pill of claim 2 wherein said first quantity  
2               of weighting agent is adapted to produce a density substantially the same as the  
3               density of a drilling fluid used to drill a formation being treated.
- 1           4.       The high fluid loss spotting pill of claim 2 wherein said first quantity  
2               of weighting agent produces a spotting pill having a density of at least about 9 ppg.
- 1           5.       The high fluid loss spotting pill of claim 1 wherein 85 wt.% or more of  
2               said LCM is acid soluble.
- 1           6.       The high fluid loss spotting pill of claim 1 wherein 90 wt.% or more of  
2               said LCM is acid soluble.
- 1           7.       The high fluid loss spotting pill of claim 2 wherein 85 wt.% or more of  
2               said LCM is acid soluble.

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1           8.     The high fluid loss spotting pill of claim 2 wherein 90 wt.% or more of  
2     said LCM is acid soluble.

1           9.     The high fluid loss spotting pill of claim 3 wherein 85 wt.% or more of  
2     said LCM is acid soluble.

1           10.    The high fluid loss spotting pill of claim 3 wherein 90 wt.% or more of  
2     said LCM is acid soluble.

1           11.    The high fluid loss spotting pill of claim 4 wherein 85 wt.% or more of  
2     said LCM is acid soluble.

1           12.    The high fluid loss spotting pill of claim 4 wherein 90 wt.% or more of  
2     said LCM is acid soluble.

1           13.    The high fluid loss spotting pill of claim 1 wherein said acid soluble  
2     mineral particulate is selected from the group consisting of salts of alkaline earth  
3     metals, silicates, hematites, and acid soluble mineral oxides.

1           14.    The high fluid loss spotting pill of claim 1 wherein said acid soluble  
2     mineral particulate is selected from the group consisting of preferably carbonates of  
3     alkaline earth metals and silicates of alkaline earth minerals.

1           15.    The high fluid loss spotting pill of claim 1 wherein said acid soluble  
2     mineral particulate is a carbonate of an alkaline earth metal.

1           16.    The high fluid loss spotting pill of claim 15 wherein said acid soluble  
2     mineral particulate is a combination of granular form and flake form.

1           17.    The high fluid loss spotting pill of claim 16 wherein said granular form  
2     is coarse grain and said flake form is fine grain.

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1           18.    The high fluid loss spotting pill of claim 2 wherein said acid soluble  
2 mineral particulate is selected from the group consisting of salts of alkaline earth  
3 metals, silicates, hematites, and acid soluble mineral oxides.

1           19.    The high fluid loss spotting pill of claim 2 wherein said acid soluble  
2 mineral particulate is selected from the group consisting of preferably carbonates of  
3 alkaline earth metals and silicates of alkaline earth minerals.

1           20.    The high fluid loss spotting pill of claim 2 wherein said acid soluble  
2 mineral particulate is a carbonate of an alkaline earth metal.

1           21.    The high fluid loss spotting pill of claim 20 wherein said acid soluble  
2 mineral particulate is a combination of granular form and flake form.

1           22.    The high fluid loss spotting pill of claim 20 wherein said granular form  
2 is coarse grain and said flake form is fine grain.

1           23.    The high fluid loss spotting pill of claim 21 wherein said granular form  
2 is coarse grain and said flake form is fine grain.

1           24.    The high fluid loss spotting pill of claim 3 wherein said acid soluble  
2 mineral particulate is selected from the group consisting of salts of alkaline earth  
3 metals, silicates, hematites, and acid soluble mineral oxides.

1           25.    The high fluid loss spotting pill of claim 3 wherein said acid soluble  
2 mineral particulate is selected from the group consisting of preferably carbonates of  
3 alkaline earth metals and silicates of alkaline earth minerals.

1           26.    The high fluid loss spotting pill of claim 3 wherein said acid soluble  
2 mineral particulate is a carbonate of an alkaline earth metal.

1           27.    The high fluid loss spotting pill of claim 26 wherein said acid soluble  
2 mineral particulate is a combination of granular form and flake form.

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1           44.     The high fluid loss spotting pill of claim 38 wherein said acid soluble  
2 mineral particulate is selected from the group consisting of salts of alkaline earth  
3 metals, silicates, hematites, and acid soluble mineral oxides.

1           45.     The high fluid loss spotting pill of claim 38 wherein said acid soluble  
2 mineral particulate is selected from the group consisting of preferably carbonates of  
3 alkaline earth metals and silicates of alkaline earth minerals.

1           46.     The high fluid loss spotting pill of claim 38 wherein said acid soluble  
2 mineral particulate is a carbonate of an alkaline earth metal.

1           47.     The high fluid loss spotting pill of claim 45 wherein said acid soluble  
2 mineral particulate is a combination of granular form and flake form.

1           48.     The high fluid loss spotting pill of claim 46 wherein said acid soluble  
2 mineral particulate is a combination of granular form and flake form.

1           49.     The high fluid loss spotting pill of claim 47 wherein said granular form  
2 is fine grain and said flake form is fine grain.

1           50.     The high fluid loss spotting pill of claim 39 wherein said acid soluble  
2 mineral particulate is selected from the group consisting of salts of alkaline earth  
3 metals, silicates, hematites, and acid soluble mineral oxides.

1           51.     The high fluid loss spotting pill of claim 39 wherein said acid soluble  
2 mineral particulate is selected from the group consisting of preferably carbonates of  
3 alkaline earth metals and silicates of alkaline earth minerals.

1           52.     The high fluid loss spotting pill of claim 39 wherein said acid soluble  
2 mineral particulate is calcium carbonate.

1           53.     The high fluid loss spotting pill of claim 52 wherein said calcium  
2 carbonate is a combination of granular form and flake form.

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1           54.    The high fluid loss spotting pill of claim 53 wherein said granular form  
2   is fine grain and said flake form is fine grain.

1           55.    The high fluid loss spotting pill of claim 38 having a yield point of  
2   about 5 or more.

1           56.    The high fluid loss spotting pill of claim 39 having a yield point of  
2   about 5 or more.

1           57.    A high fluid loss spotting pill comprising:  
2           a carrier fluid;  
3           a first quantity of weighting agent adapted to produce a density substantially  
4                   the same as the density of a drilling fluid used to drill a formation  
5                   being treated;  
6           a second quantity of suspending agent effective to suspend said weighting  
7                   agent in said carrier fluid;  
8           an amount of LCM consisting essentially of calcium carbonate particulate;  
9           said quantity, said amount, and said form being adapted to form a substantially  
10                   impermeable, acid soluble filtercake upon injection of said  
11                   composition with an effective carrier fluid into said wellbore and  
12                   defluidization.

1           58.    The high fluid loss spotting pill of claim 57 wherein said calcium  
2   carbonate particulate comprises granular form and flake form.

1           59.    The high fluid loss spotting pill of claim 58 wherein said granular form  
2   is coarse grain and said flake form is fine grain.

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1           60.    The high fluid loss spotting pill of claim 57 wherein said first quantity  
2 of said weighting agent produces a spotting pill having a density of at least about 9  
3 ppg.

1           61.    The high fluid loss spotting pill of claim 58 wherein said first quantity  
2 of said weighting agent produces a spotting pill having a density of at least about 9  
3 ppg.

1           62.    The high fluid loss spotting pill of claim 59 wherein said first quantity  
2 of said weighting agent produces a spotting pill having a density of at least about 9  
3 ppg.

1           63.    A high fluid loss spotting pill comprising:  
2 a carrier fluid;  
3 a first quantity of weighting agent adapted to produce a density substantially  
4 the same as the density of a drilling fluid used to drill a formation  
5 being treated;  
6 a second quantity of suspending agent effective to suspend said weighting  
7 agent in said carrier fluid;  
8 an LCM consisting essentially of:  
9 a third quantity of acid soluble mineral fiber; and;  
10 an amount of calcium carbonate particulate;  
11 said quantity, said amount, and said form being adapted to form a substantially  
12 impermeable, acid soluble filtercake upon injection of said  
13 composition with an effective carrier fluid into said wellbore and  
14 defluidization.

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4	10	5	% to	10	%
5	14	5	% to	10	%
6	18	1	% to	5	%
7	20	1	% to	5	%
8	25	1	% to	5	%
9	>25	87	% to	.65	%.

4	10	8	%
5	14	7	%
6	18	3	%
7	20	1	%
8	25	1	%

81. The high fluid loss spotting pill of claim 63 wherein said third quantity is 10 wt.% or more of said composition.

1           82.    The high fluid loss spotting pill of claim 63 wherein said third quantity  
2 is about 25 wt.% of said composition.

3           83.    The high fluid loss spotting pill of claim 81 wherein said amount is  
4 about 5

1           0 wt.% of said composition.

1           84.    The high fluid loss spotting pill of claim 82 wherein said amount is  
2 about 50 wt.% of said composition.

1           85.    The high fluid loss spotting pill of claim 65 wherein said third quantity  
2 is 10 wt.% or more of said composition.

1           86.    The high fluid loss spotting pill of claim 65 wherein said third quantity  
2 is about 25 wt.% of said composition.

1           87.    The high fluid loss spotting pill of claim 85 wherein said amount is  
2 about 50 wt.% of said composition.

1           88.    The high fluid loss spotting pill of claim 86 wherein said amount is  
2 about 50 wt.% of said composition.

1           89.    A high fluid loss spotting pill comprising:  
2 a carrier fluid;  
3 an LCM consisting essentially of an amount and form of acid soluble mineral  
4 particulate;  
5 said amount and said form being adapted to form a substantially impermeable,  
6 acid soluble filtercake upon injection of said composition with said  
7 carrier fluid into said wellbore and defluidization;  
8 a first quantity of weighting agent; and

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104. The high fluid loss spotting pill of claim 49 wherein said suspending agent is selected from the group consisting of attapulgite and quaternized attapulgite.

1 <sup>100</sup>~~105~~. The high fluid loss spotting pill of claim 54 wherein said suspending  
2 agent is selected from the group consisting of attapulgite and quaternized attapulgite.

1 <sup>101</sup>~~106~~. The high fluid loss spotting pill of claim 57 wherein said suspending  
2 agent is selected from the group consisting of attapulgite and quaternized attapulgite.

1 <sup>102</sup>~~107~~. The high fluid loss spotting pill of claim 58 wherein said suspending  
2 agent is selected from the group consisting of attapulgite and quaternized attapulgite.

1 <sup>103</sup>~~108~~. The high fluid loss spotting pill of claim 59 wherein said suspending  
2 agent is selected from the group consisting of attapulgite and quaternized attapulgite.

1 <sup>104</sup>~~109~~. The high fluid loss spotting pill of claim 63 wherein said suspending  
2 agent is selected from the group consisting of attapulgite and quaternized attapulgite.

1 <sup>105</sup>~~110~~. The high fluid loss spotting pill of claim 64 wherein said suspending  
2 agent is selected from the group consisting of attapulgite and quaternized attapulgite.

1 <sup>106</sup>~~111~~. The high fluid loss spotting pill of claim 65 wherein said suspending  
2 agent is selected from the group consisting of attapulgite and quaternized attapulgite.

1 <sup>107</sup>~~112~~. The high fluid loss spotting pill of claim 68 wherein said suspending  
2 agent is selected from the group consisting of attapulgite and quaternized attapulgite.

1 <sup>108</sup>~~113~~. The high fluid loss spotting pill of claim 2 wherein said suspending  
2 agent comprises a ratio of attapulgite to quaternized attapulgite.

1 <sup>109</sup>~~114~~. The high fluid loss spotting pill of claim 27 wherein said suspending  
2 agent comprises a ratio of attapulgite to quaternized attapulgite.

1 <sup>110</sup>~~115~~. The high fluid loss spotting pill of claim 57 wherein said suspending  
2 agent comprises a ratio of attapulgite to quaternized attapulgite.

1 <sup>111</sup>~~116~~. The high fluid loss spotting pill of claim 113 wherein said ratio is  
2 about 50:50.

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FOOTNOTES

- 1 <sup>112</sup>~~117~~. The high fluid loss spotting pill of claim 114 wherein said ratio is  
2 about 50:50.
- 1 <sup>113</sup>~~118~~. The high fluid loss spotting pill of claim 115 wherein said ratio is  
2 about 50:50.

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